

ORIGINAL RESEARCH

Costs and Effectiveness of Mindfulness-Based Art Therapy versus Standard Breast Cancer Support Group for Women with Cancer

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BACKGROUND: The results of several studies have demonstrated that women and men with a cancer diagnosis benefit from interventions to reduce distress and improve quality of life (QOL). However, little is known about the costs and effectiveness of such interventions. Identifying a stress-reduction program that is low cost and effective is important for payers, employers, and healthcare professionals, as well as for patients with cancer.

OBJECTIVE: To evaluate the direct costs and effectiveness of the mindfulness-based art therapy (MBAT) program compared with the cost and effectiveness of a breast cancer support group (BCSG).

METHODS: This economic pilot study evaluated the direct costs and effectiveness of a mindfulness-based intervention for stress reduction in patients with breast cancer who are receiving care versus the cost of a usual care support group used as the comparator. The cost variables for each cohort included the cost of program delivery (ie, staff and supplies), mileage reimbursements, medication costs, and healthcare utilization costs. Effectiveness was measured by a change in quality-adjusted life-year derived from the 36-Item Short-Form Health Survey (SF-36) QOL battery.

RESULTS: Overall, the cost for 191 participants in the MBAT intervention group was \$992.49 per participant compared with \$562.71 per participant for the BCSG intervention. Both interventions achieved a similar change in healthcare utilization based on the SF-36 QOL battery. Although the MBAT intervention was more costly than a BCSG intervention, sensitivity analysis showed that the cost-effectiveness of the MBAT intervention could achieve parity with that of a BCSG if some intervention-related costs, such as staff time and supplies, were reduced.

CONCLUSION: As psychosocial cancer care becomes more refined with time, it will be important to determine the best and most cost-effective interventions for patients with cancer, particularly in light of healthcare reform. Information from this study could help inform payers, employers, and other stakeholders regarding which interventions would be least costly and most effective for patients with cancer.

KEY WORDS: art therapy, behavioral medicine, breast cancer support group, integrative medicine, mindfulness-based stress reduction, nontraditional supportive interventions

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There is evidence to suggest that decreasing psychological stress in patients with cancer positively affects their quality of life (QOL).^{1,2} The results of several studies have demonstrated that women and men with a cancer diagnosis benefit from interventions to reduce distress and improve QOL.¹⁻⁴ However, little is known about the cost and effectiveness of such interventions, and no randomized controlled clinical trials have addressed this issue. Identifying a stress-reduction program that is low cost and effective is important

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KEY POINTS

- Evidence suggests that patients with cancer benefit from interventions to reduce distress and improve QOL, but little is known about the cost and effectiveness of such interventions.
- This pilot study evaluated the costs and effectiveness of 2 interventions—a mindfulness-based art therapy (MBAT) program and a breast cancer support group (BCSG)—for women with cancer.
- The study examined costs for intervention delivery, mileage reimbursement, medications, and healthcare utilization; effectiveness was measured by change in utility.
- The cost per participant was \$992.49 for the MBAT intervention and \$562.71 for the BCSG.
- Although the MBAT intervention costs more than the BCSG, sensitivity analysis showed that their cost-effectiveness could align if some MBAT costs could be reduced.
- There were no significant differences in utility score between the BCSG and the MBAT group.
- These findings could help inform payers, employers, and other stakeholders about the least costly and most effective stress-reduction intervention for women with cancer.
- Longer-term data from a larger sample are needed to better understand the implications of MBAT.

for payers, employers, and healthcare professionals, as well as for patients with cancer.

The Parent Study

This economic pilot study aims to capture the costs of a mindfulness-based art therapy (MBAT) intervention compared with a standard-of-care approach of a breast cancer support group (BCSG). The use of the MBAT intervention versus a BCSG intervention was tested in a clinical trial (ie, the parent study), which was described in detail elsewhere.⁵

Briefly, the overall goal of the parent study was to compare the effect of the MBAT intervention with the BCSG intervention on psychological distress and health-related QOL in women with breast cancer who were enrolled in a randomized controlled trial.⁵ Women who were diagnosed with breast cancer at least 6 months before entering the study were recruited from physicians and registry lists, interviewed, and randomized to either the MBAT intervention arm or the BCSG intervention arm. To control for time attention, MBAT and the BCSG consisted of eight 2.5-hour sessions held over 8

consecutive weeks.⁵ The current study captured and compared the costs of each arm.

The MBAT arm involved mindfulness-based stress-reduction techniques along with art therapy strategies for participants and included homework assignments for the following week. Specifically, the art tasks each week were helpful for expressing thoughts and/or feelings that may occur during the mindfulness portion of the session. The art tasks were considered a nonverbal mode of expressing the patients' thoughts and feelings, such as drawing a picture of themselves, their use of color, and drawing pleasant or unpleasant pictures.⁵

The BCSG arm provided didactic lectures (eg, nutrition, meditation, physical therapy, stress reduction), as well as an opportunity to discuss the weekly topics among themselves, thus providing peer support. The MBAT and the BCSG interventions were designed by investigators and interventionists who were qualified and experienced in art therapy, mindfulness-based stress reduction, and BCSGs.⁵

The parent study had 2 primary goals. The first was to test the hypothesis that patients with breast cancer who had the MBAT intervention would demonstrate significantly fewer symptoms of psychological distress than patients with breast cancer who had the BCSG intervention. The second goal was to test the hypothesis that patients with breast cancer in the MBAT intervention arm would demonstrate significantly greater improvements in key aspects of health-related QOL than patients in the BCSG intervention arm.⁵

The Economic Pilot Study

The overall goal of our economic pilot study was to evaluate the direct costs of delivering MBAT versus BCSG, and to examine the costs and effectiveness of the MBAT intervention versus a BCSG using quality-adjusted life-year (QALY) deduced from the 36-Item Short-Form Health Survey (SF-36) version 2, because this QOL instrument was already a component of the parent trial. Thus, the women in our economic pilot study were drawn from the parent study, and our economic pilot study was based on a supplemental grant to the grant for the parent study.

The specific goals of our economic pilot study were to:

1. Calculate the cost of an MBAT versus a BCSG intervention
2. Capture the healthcare costs resulting from cancer-related psychological distress (defined as depression and/or anxiety) in the MBAT arm and the BCSG arm; these costs were calculated in the form of outpatient visits, emergency department visits, inpatient admissions, and medication treatments
3. Report on the effectiveness of MBAT versus a BCSG, which was measured as health utility

Table 1 Baseline Characteristics for the BCSG Arm versus the MBAT Arm

| Demographic variable | BCSG arm (N = 93) | MBAT arm (N = 98) |
|--|-----------------------|-----------------------|
| Age, yrs, mean (range) | 56.4 (33-81) | 56.9 (31-87) |
| Age, yrs, N (%) | | |
| ≤55 | 61 (44) | 60 (61) |
| >55 | 32 (34) | 38 (39) |
| Brief Symptom Inventory group, ^a N (%) | | |
| Low | 61 (66) | 60 (61) |
| High | 32 (34) | 38 (39) |
| Race, N (%) | | |
| Black | 37 (40) | 35 (36) |
| White | 54 (58) | 59 (60) |
| Asian/other | 2 (2) | 4 (4) |
| Marital status, N (%) | | |
| Single | 16 (17) | 26 (27) |
| Married | 43 (46) | 42 (43) |
| Widowed | 11 (12) | 12 (12) |
| Divorced/separated | 23 (25) | 18 (18) |
| Months between diagnosis and intake, median (range) | 30 (3-146) | 38 (7-91) |
| Disease progression, N (%) | | |
| T | 54 (58) | 47 (48) |
| N | 17 (18) | 24 (24) |
| M | 5 (5) | 4 (4) |
| Remission | 4 (4) | 11 (11) |
| Unknown | 13 (14) | 12 (12) |
| Breast cancer stage, N (%) | | |
| 0 | 1 (1) | 1 (1) |
| I | 39 (42) | 36 (37) |
| II | 23 (25) | 25 (26) |
| III | 5 (5) | 11 (11) |
| IV | 2 (2) | 3 (3) |
| Unknown | 23 (25) | 22 (22) |
| Mean (range) | 1.54 (0-4); N = 70 | 1.72 (0-4); N = 76 |
| Patients reporting anxiety, N (%) | 37 (38) | 37 (38) |
| Patients reporting depression, N (%) | 34 (37) | 33 (34) |

^aThe Brief Symptom Inventory measures psychosocial stress level, stratified here into low stress versus high stress.
BCSG indicates breast cancer support group; MBAT, mindfulness-based art therapy.

4. Compare the average cost-effectiveness of the MBAT intervention to the average cost of a BCSG.

Our economic pilot study is significant in that it is based on real-world cost and outcomes data from the parent study, and it sheds light on the cost-effectiveness of MBAT and BCSGs. Our economic pilot study is also novel in that we used the SF-36, a well-established QOL tool used to calculate QALY.

Methods

The overall goal of our economic pilot study was to

evaluate the direct costs from the parent study data that compared MBAT and a BCSG and to examine the costs and effectiveness of each arm of the intervention using health utilities.

Our study was based on cost and outcomes data taken from the existing MBAT randomized parent trial and consisted of an MBAT intervention and a BCSG intervention. The patient population for our pilot study consisted of 191 of the proposed 439 MBAT trial participants for whom we could collect the required costs and outcomes data prospectively.

The demographic characteristics of participants in our cost study are presented in **Table 1** and are consistent with the sample recruited for the parent trial. The cost analysis was performed from a health plan perspective to examine the direct healthcare costs in the 2 study groups.

Cost Measures

The cost measures were captured at baseline and at 9 weeks and included the direct costs for each intervention, inpatient and outpatient medical services, and any medication used by study patients.

MBAT intervention costs. The costs associated with delivering the MBAT intervention were captured. We evaluated all costs involved in delivering the intervention as separate cost activities, because this allowed us to analyze and understand the economic drivers of the intervention. The costs were calculated for each component of the intervention (ie, screening, mindfulness meditation, art therapy, group processing) using the wage rates of trained interventionists and accounting for time in interventionist training, participant screening, preparation, intervention, and documentation.

The per-hour compensation for mindfulness meditation, art therapy, and group processing were calculated using the wage rates for the individuals performing these services. Fringe benefit costs (ie, healthcare, disability, life insurance) were added to all staff member costs by the application of a 25% fringe benefit rate. Material costs included study documentation forms, audiotapes for meditation, and reading materials. The interventionists' travel expenses to and from the participants' homes were captured per visit, and were calculated based on a reimbursement at the government rate (which was obtained at the time of the cost analysis) of approximately \$0.55 per mile.

The travel costs of the study participants to the MBAT sessions were also calculated. The total MBAT intervention costs (which were reported in 2011 dollars) were calculated by summing the costs of all the intervention delivery components. A univariate sensitivity analysis was performed to test whether varying the cost of intervention components resulted in the MBAT being

less costly than a BCSG. Specifically, session leaders and art supplies were each varied separately, from \$0 (representing donated time and supplies) up to the base-case value. A bivariate sensitivity analysis was conducted to determine the intervention cost component thresholds that would result in MBAT cost being equal to or less than a BCSG.

BCSG intervention costs. As in the cost analysis for the MBAT arm, the costs for the BCSG arm were computed by capturing the personnel time (ie, for training, screening, preparation, intervention delivery, and documentation) and the supply costs required to administer the BCSG intervention through a cancer center (that currently offers such interventions).

Inpatient and outpatient medical costs. Because the MBAT and BCSG interventions were hypothesized to reduce the symptoms of psychological distress, the direct medical costs resulting from anxiety and/or depression were determined by assigning the published reimbursement rates to the participants' reported utilization of related inpatient and outpatient medical services. The median Medicare reimbursement rates were used, because they are publicly available and serve as a base level of reimbursement for the entire healthcare system.

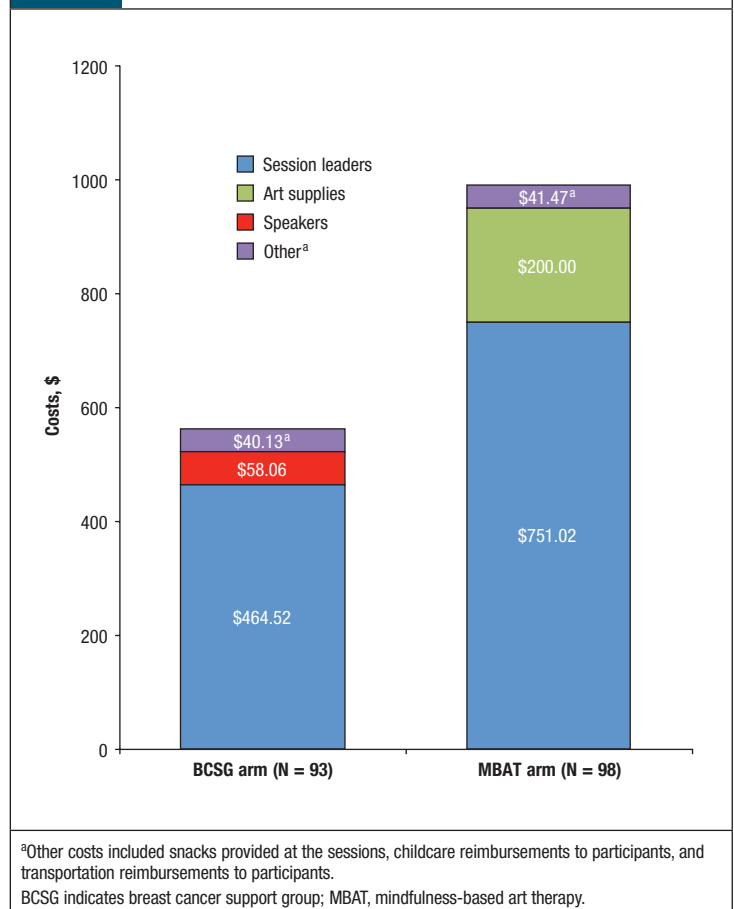
Hospitalizations and emergency department costs were captured at baseline and at 9 weeks for the MBAT and the BCSG intervention arms. Participants completed baseline assessments 1 to 2 weeks before the beginning of the interventions and a second assessment 1 week after the interventions were completed, which determined the 9-week assessment period. The participants were asked to report the number of days they stayed overnight in the hospital and the reason for a hospitalization or emergency department visit.

Only healthcare services that were related to anxiety or depression were included. The costs for inpatient services were calculated by applying the Medicare reimbursement rates for the applicable diagnosis-related group, and the costs for outpatient services were based on the Medicare reimbursement rates for the applicable outpatient care using *Current Procedural Terminology* codes. All costs were adjusted to 2011 dollars using the US Consumer Price Index rate of inflation for healthcare services.⁶

Medication costs. Medications used to treat anxiety and/or depression, as well as pain and sleep, were captured at baseline and at 9 weeks for both study arms. The estimates for medication costs were based on the average wholesale price for the medications recorded in the trial. Pain medications were included in the study, because somatic pain is often secondary to depression.⁷

Adverse event costs. Although cost analyses generally include the costs of adverse events in each study arm,

Figure 1 Intervention Costs per Participant for the BCSG Arm and the MBAT Arm



because MBAT is a support program, the risk for adverse events was expected to be minimal. Even if such events were captured, it would be difficult to establish causality between the event and the MBAT intervention. The adverse events costs were therefore considered to be \$0 for the purpose of this study.

Effectiveness Measure

The effectiveness measure used in the analysis consisted of health utilities deduced from the SF-36, because this instrument was already a component of the parent trial.⁵ The SF-36 questionnaire was administered at baseline and at 9 weeks to both study arms. The SF-36 instrument has been extensively validated and used in women with cancer; this instrument consists of 8 QOL domains, including physical functioning, role-physical, role-emotional, bodily pain, vitality, mental health, social functioning, and general health.⁸⁻¹⁰

Each domain is scored individually on a scale of 0 (worst health state) to 100 (best health state); scores can also be assessed as to the summary scales of physical

Table 2 Difference in Monthly Healthcare Utilization Costs for the BCSG and the MBAT Arms, from Baseline to 9 Weeks^a

| Cost type | BCSG arm (N = 31) | | | MBAT arm (N = 47) | | |
|-------------------------------------|------------------------|-------------------------|------------|--------------------------|-----------------------|------------|
| | Baseline, mean (SD) | 9 wks, mean (SD) | Difference | Baseline, mean (SD) | 9 wks, mean (SD) | Difference |
| Outpatient calls to physicians, \$ | 0.00 (0.00) N = 0 | 5.82 (16.95) N = 13 | 5.82 | 0.00 (0.00) N = 0 | 0.00 (0.00) N = 11 | 0.00 |
| Outpatient visits to physicians, \$ | 3.60 (12.45) N = 25 | 26.24 (62.03) N = 12 | 22.64 | 8.75 (23.60) N = 36 | 0.00 (0.00) N = 11 | -8.75 |
| Emergency department visits, \$ | 0.00 (0.00) N = 23 | 0.00 (0.00) N = 12 | 0.00 | 9.46 (59.82) N = 40 | 0.00 (0.00) N = 11 | -9.46 |
| Hospitalizations, \$ | 0.00 (0.00) N = 26 | 0.00 (0.00) N = 12 | 0.00 | 80.75 (517.03) N = 41 | 0.00 (0.00) N = 11 | -80.75 |
| Mean cost difference sum, \$ | | | 28.46 | | | -98.96 |

^aSample sizes represent a subset of participants in each group for whom healthcare utilization data were available. BCSG indicates breast cancer support group; MBAT, mindfulness-based art therapy; SD, standard deviation.

Table 3 Difference in Monthly Medication Costs for BCSG and MBAT, from Baseline to 9 Weeks^a

| Cost type | BCSG arm (N = 31) | | | MBAT arm (N = 47) | | |
|------------------------------|-------------------------|------------------------|------------|-------------------------|----------------------|------------|
| | Baseline, mean (SD) | 9 wks, mean (SD) | Difference | Baseline, mean (SD) | 9 wks, mean (SD) | Difference |
| Antidepressants, \$ | 4.43 (10.97) N = 13 | 0.00 (0.00) N = 0 | -4.43 | 18.31 (50.50) N = 28 | 0.00 (0.00) N = 1 | -18.31 |
| Anxiolytics, \$ | 4.35 (11.72) N = 18 | 0.60 (0.85) N = 2 | -3.75 | 8.48 (28.24) N = 30 | 4.80 (6.81) N = 3 | -3.68 |
| Analgesics, \$ | 20.15 (51.67) N = 13 | 10.35 (14.64) N = 2 | -9.80 | 20.90 (31.48) N = 22 | 0.00 (0.00) N = 2 | -20.90 |
| Sleep, \$ | 19.94 (56.07) N = 19 | 2.74 (7.03) N = 8 | -17.20 | 2.54 (6.35) N = 21 | 1.60 (2.77) N = 3 | -0.94 |
| Mean cost difference sum, \$ | | | -35.18 | | | -43.83 |

^aSample sizes represent a subset of participants in each group for whom medication data were available. BCSG indicates breast cancer support group; MBAT, mindfulness-based art therapy; SD, standard deviation.

component and mental component. For the current study, the 8 domain scores of the SF-36 instrument were converted to health utilities at baseline and at 9 weeks by reducing the items to the SF-6D instrument. This approach has been used in a previous study related to mental health.¹¹

We calculated QALY values for the 2 interventions using the following equation from baseline to 9 weeks:

$$QALY = \frac{1}{2} \times (\text{time in years}) \times (\text{change in utility}) = \frac{1}{2} \times (9/52) \times (\text{change in utility}).$$

The average cost-effectiveness ratios were calculated for the study groups as the net per-participant costs (intervention cost + net healthcare utilization cost + net medication cost) divided by the change in QALY, and the theoretical change in utility required to achieve cost-effectiveness parity in the 2 groups was calculated.

Results

The participant population for our economic pilot study was similar to the population in the parent study.⁵ The baseline characteristics for the parent study are shown in Table 1.⁵ No differences were seen in patient

baseline characteristics between the BCSG arm and the MBAT arm.

The costs for each intervention are shown in Figure 1. The cost in the BCSG arm was \$562.71 per participant compared with \$992.49 per participant in the MBAT arm. MBAT was more costly than the BCSG primarily because of the cost of session leaders and art supplies in the MBAT arm (Figure 1). The costs of healthcare utilization and medications were analyzed from baseline to 9 weeks.

Table 2 shows the monthly outpatient and inpatient healthcare utilization costs at baseline and at 9 weeks for the BCSG and the MBAT cohorts. For the BCSG arm, the mean monthly cost of healthcare utilization was \$3.60 at baseline and \$32.06 at 9 weeks. The difference in means from baseline to 9 weeks for the BCSG arm was \$28.46, with a positive value corresponding to a cost increase. The MBAT group experienced a decrease in healthcare utilization costs, with a difference of -\$98.96 from baseline to 9 weeks (ie, a monthly mean cost of \$98.96 at baseline and \$0.00 at 9 weeks).

The mean monthly costs of medications related to

anxiety, depression, pain, and sleep for both groups at baseline and at 9 weeks are shown in **Table 3**. At baseline, the BCSG cohort was spending a monthly mean of \$48.87 on medications versus \$13.69 at 9 weeks. The MBAT cohort was spending a mean of \$50.23 on medications at baseline versus \$6.40 at 9 weeks.

The BCSG and the MBAT groups showed a decrease in medication costs from baseline to 9 weeks; the medication costs for the BCSG arm decreased by a mean of \$35.18 monthly compared with \$43.83 monthly for the MBAT group. Statistical differences in healthcare utilization and medication costs were not examined because of the small sample size.

Univariate sensitivity analysis yielded MBAT costs ranging from \$241 to \$792 when session leaders and art supply costs were varied. The bivariate sensitivity analysis (**Figure 2**) suggested that if the session leader cost is less than \$550, MBAT can be less costly than a BCSG.

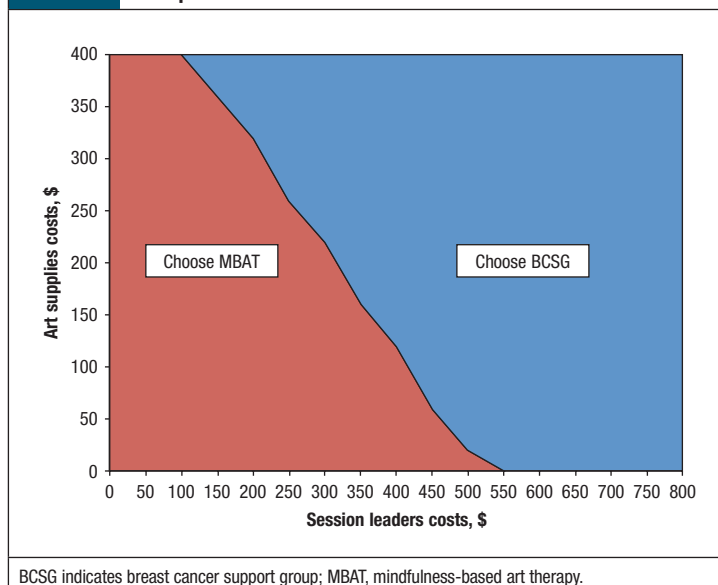
Health utility scores at baseline and at 9 weeks are presented in **Table 4**. From baseline to 9 weeks, the mean SF-6D health utility score increased from 0.68 ± 0.15 to 0.73 ± 0.14 for the BCSG arm, and from 0.65 ± 0.12 to 0.70 ± 0.13 for the MBAT group. Both mean scores increased by 0.05 from baseline to 9 weeks, representing a gain of 0.00433 QALY. Comparing the 2 groups, no statistical significance in utility score differences was found between the BCSG and the MBAT arms. All of the SF-36 scores showed no significant difference between the BCSG and the MBAT arms, although both intervention arms showed improvement, similar to the SF-6D.

The net cost in the BCSG was \$555.99, with a QALY gain of 0.00433, yielding an average cost-effectiveness ratio of \$128,404 per QALY. For MBAT, the net cost was \$849.70 with a QALY gain of 0.00433, resulting in an average cost-effectiveness ratio of \$196,236 per QALY for MBAT. To achieve cost-effectiveness parity for these 2 treatment approaches, the MBAT intervention would need to have a gain of 0.00588 QALY, corresponding to an increase of 0.076 in the mean MBAT SF-6D health utility score.

Discussion

To date, the medical literature and health policy community have largely focused on the cost-effectiveness of

Figure 2 Bivariate Sensitivity Analysis of MBAT Intervention Cost Components



drugs, devices, and diagnostics, leaving decision makers with little information about the costs and effectiveness of nonpharmacologic programs, such as MBAT. To our knowledge, programs such as MBAT are not currently covered by health insurers.

In our study, the direct costs of MBAT were examined, as were changes in QALY values. The MBAT intervention costs more per person than the BCSG intervention, but our pilot study shows that this cost difference may have been associated with a reduction in the need for outpatient and inpatient visits.

The BCSG and MBAT interventions might have contributed to a decrease in medication costs (including anxiolytics, antidepressants, analgesics, and sleep medications). Although MBAT is the more costly intervention, the BCSG and MBAT cohorts showed a similar utility improvement at 9 weeks. The cost of MBAT could be rendered comparable to that of a BCSG if the session leader and supply costs could be reduced.

To date, only 1 article on the cost-effectiveness of a BCSG was identified, but this study used clinical symptoms (ie, mood disturbance and pain) as the effectiveness

Table 4 Difference in Health Utility for BCSG and MBAT, from Baseline to 9 Weeks^a

| Utility type | BCSG arm | | | MBAT arm | | |
|----------------------------|---------------------------------|------------------------------|------------|----------------------------------|-------------------------------|------------|
| | Baseline, mean (SD) (N = 86) | 9 wks, mean (SD) (N = 54) | Difference | Baseline, mean (SD) (N = 171) | 9 wks, mean (SD) (N = 114) | Difference |
| SF-6D health utility score | 0.68 (0.15) | 0.73 (0.14) | 0.05 | 0.65 (0.12) | 0.70 (0.13) | 0.05 |

^aSample size represents the parent trial population.
BCSG indicates breast cancer support group; MBAT, mindfulness-based art therapy; SD, standard deviation.

measure, not health utility.¹² Another trial found that weekly support groups for 1 year can be an effective mechanism for reducing depression and anxiety in patients with metastatic breast cancer; although the investigators did not examine cost-effectiveness, they concluded that such programs had the potential to be cost-effective.¹³

Limitations

This economic pilot study has some limitations. First, the sample size was small, which precludes significance testing about healthcare and medication costs, and may also limit the ability to detect relative changes in health utility values in these groups.

Second, this study only examined a 9-week time frame, which does not allow the calculation of changes in long-term costs and health utilities resulting from the MBAT intervention.

In addition, productivity losses were excluded from our economic pilot study but could be an important contributor to the overall costs of MBAT and BCSG, because many participants were expected to be working.

Conclusion

This economic pilot study provides an increased understanding of the costs and effectiveness of delivering MBAT versus a BCSG, and used health utility as the effectiveness measure. Although an MBAT intervention is more costly than usual support group care and has a similar effect on utility as a BCSG, MBAT may be the preferred option for those who are motivated by the components of the program (ie, artwork coupled with mindfulness-based approaches). The parent trial showed that MBAT participants with high stress levels at baseline experienced a greater reduction in stress than BCSG participants after 9 weeks of intervention, suggesting that a subanalysis of benefits according to baseline stress level would be useful. Longer-term data and a larger study sample are needed to

understand the true cost and QOL benefits of an MBAT program. ■

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Author Disclosure Statement

Dr Kash is the owner of and Behavioral Scientist at KM Behavioral Consulting. Ms Prioli, Dr Pizzi, Dr Newberg, Dr Morlino, Mr Matthews, and Dr Monti reported no conflicts of interest.

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STAKEHOLDER PERSPECTIVE

Creative Therapeutic Activities and Support Groups Benefit All Those Involved in Cancer Care

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PATIENTS: The psychosocial aspects of cancer may have been overlooked by payers and underutilized by physicians, but the value of these nonclinical treatment modalities has played an important role in the lives of patients for more than 3 decades.¹ As Cain and colleagues have shown decades ago, patients with cancer need hope that they can function and live life to the best of their ability, with a reasonable expectation of solid quality of life rather than an unrealistic hope for an everlasting cure.¹

What has changed since then is the emphasis, which is highlighted in the study by Prioli and colleagues that compares the costs and effectiveness of mindfulness-based art therapy versus a standard breast cancer support group for women with breast cancer.² One size does not fit all, and although some patients thrive in a group setting, others do not. Helgeson and colleagues have theorized that education support groups aid patients with their physical function as the chief benefit, and peer support groups help those who are lacking a circle of family or friends for support.³ They also point out that most patients benefit from some type of group interaction.³

In the past decade, creative therapy outlets have become a more standard approach for patients with cancer. Art therapy, music therapy, mindfulness, aromatherapy, reiki, yoga, oncology-specific exercise programs, pet therapy, journaling, personalized iPod playlists, knitting, and crocheting are all appropriate approaches. These psychosocial activities benefit patients with cancer by engaging their personal interests and preferences in the treatment process.^{4,5}

PHYSICIANS: With a growing emphasis on patient-centered care, physicians (including oncologists) welcome the opportunity to offer their patients nontraditional resources. Such activities let patients explore their creativity and share their questions and fears with peers and trained facilitators. They help to place the focus on other aspects of cancer treatment, recovery, and survivorship, and they allow a discussion about the phys-

ical manifestations of cancer in a nonthreatening, non-judgmental environment. Studies have shown that physicians inspire trust, and often enhance patient adherence to treatment, when patients view themselves as part of the decision-making team.⁶ Creative psychosocial activities for patients can strengthen the bond between patients and physicians and be an effective addition to the treatment regimen.

PAYERS: Research such as the focus of the article by Prioli and colleagues demonstrates the value of complementary services for patients with cancer. Some commercial payers will allow a gym membership as part of a preventive maintenance and wellness program. Physical therapy has long been approved by private and public insurance health plans. Further analysis of the overall benefit of cancer support groups and creative therapy sessions may justify insurance coverage for such programs as part of the care plan.⁴ The cost per patient is minimal compared with hospital readmission and may reduce the need for costly medications and result in a lower score on the National Comprehensive Cancer Network Distress Thermometer screening tool. An informed, involved patient may make better decisions, adhere to treatment protocols, and have better clinical outcomes.^{6,7} This translates into a winning proposition for all healthcare stakeholders, including patients, physicians, and payers. ■

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